

SONY®

CAMERA PC SET-UP UNIT

BZP-100

MAINTENANCE MANUAL

1st Edition

Serial No. 10001 and Higher

警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理など行くと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

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Manual Structure

Purpose of this manual

This manual is the maintenance manual for Camera PC Setup Unit BZP-100. This manual describes the information items necessary when the unit is supplied and installed, items on maintenance, and items that premise the service based on the components parts such as schematic diagrams, board layouts and spare parts list, assuming use of system and service engineers.

Contents

This followings are summaries of the each section for understanding the manual.

Section 1 Installation

Describes information about installation conditions, connector input/output signals and instance of configuration.

Section 2 Spare Parts

Describes parts list, exploded view, packing materials and supplied accessories list used in the unit.

Section 3 Semiconductor Pin Assignments

Describes function diagrams and pin names of semiconductor used in the unit.

Section 4 Schematic Diagrams

Describes schematic diagrams for every circuit board.

Section 5 Board Layout

Describes board layouts for every circuit board.

Relative manual

Besides this maintenance manual, the following manuals are available for this unit.

- **Operation Manual (Supplied with this unit)**

This manual is necessary for application and operation of this unit.

Section1

Installation

1-1. General

BZP-100 Camera PC Set-up Unit is composed of the software program to set up the camera (or camcorder) and the Camera/PC interface box. The program is provided in the three floppy disks.

Installing this program to your personal computer enables you to easily set up the camera or camcorder using a GUI (Graphical User Interface) menu on the personal computer. In addition, the use of the interface box can make the camera or camcorder compliant with the ISR (Interactive Status Reporting) protocol. In this case, the software BZI-500 is also needed.

1-2. Supplied Accessories

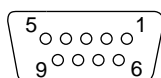
Accessories	Sony Part No.	Qt'y
6P Cable	1-751-211-11	1
RC-232C Cross Cable	1-776-529-11	1
CCA-5-10 Cable		1
BZP-100 Disk (1) Assy		1
BZP-100 Disk (2) Assy		1
BZP-100 Disk (3) Assy		1
Operation Manual		1
Maintenance Manual		1

1-3. Connectors and Cables

1-3-1. Connector Input/Output Signals

The main connector input/output signals are as follows.

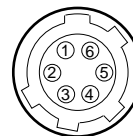
RS-232C (9P, FEMALE)



(EXTERNAL VIEW)

No.	Signal	Specifications
1	DCD IN	DATA CARRIER DETECT
2	RXD (+) IN	RECEIVED DATA
3	TXD (+) OUT	TRANSMITTED DATA
4	DTR OUT	DATA TERMINAL READY
5	SIGNAL GND	SIGNAL GND
6	DSR IN	DATA SET READY
7	RTS OUT	REQUEST TO SEND
8	CTS OUT	CLEAR TO SEND
9	NC	—

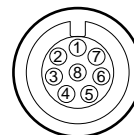
CAMCORDER (6P, MALE)



(EXTERNAL VIEW)

No.	Signal	Specifications
1	TXD	SERIAL DATA FOR CAMERA
2	RXD	
3	UNREG GND	UNREG GND
4	NC	—
5	NC	—
6	UNREG OUT	+12 V dc 100 mA

CAMERA SYSTEM (8P, FEMALE)



(EXTERNAL VIEW)

No.	Signal	Specifications
1	TVD (+)	BZP SERIAL DATA
2	TVD (—)	
3	RVD (+)	CCU/CNU/AUX SERIAL DATA
4	RVD (—)	
5	DATA GND	GND for DATA
6	POWER (+)	BZP POWER, +10 V to +30 V
7	POWER (—)	GND for POWER
8	SPARE	
C	CHASSIS GND	CHASSIS GND

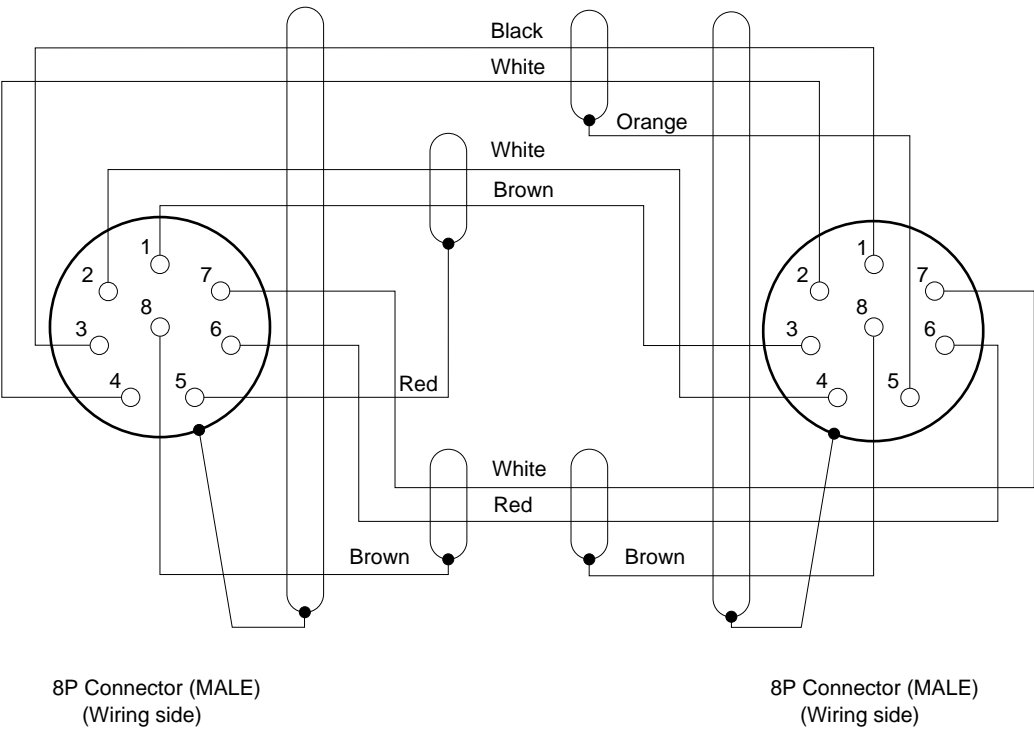
1-3-2. Connection Connector

Connection made with the connector panels during installation or service, should be made with the connectors/ complete cable assemblies specified in the following list, or equivalent parts.

Connector Name	Connection Connectors/Cables
RS-232C (9P, FEMALE)	1-566-354-11 D-SUB, 9P, MALE or 1-776-529-11 RC-232C Cross Cable
CAMCODER (6P,MALE)	1-561-800-41 PLUG, 6P, FEMALE or 1-751-211-11 6P Cable
CAMERA SYSTEM (8P, FEMALE)	1-766-848-11 PLUG, 8P, MALE or CCA CABLE ASSY (optional cable) CCA-5-10 (10 m) CCA-5-3 (3 m)

1-3-3. Wiring Diagram for Cable

CCA-5 Cable



1-4. Installation Conditions

Operating Temperature : +5 °C to +40 °C

Storage Temperature : -20 °C to +50 °C

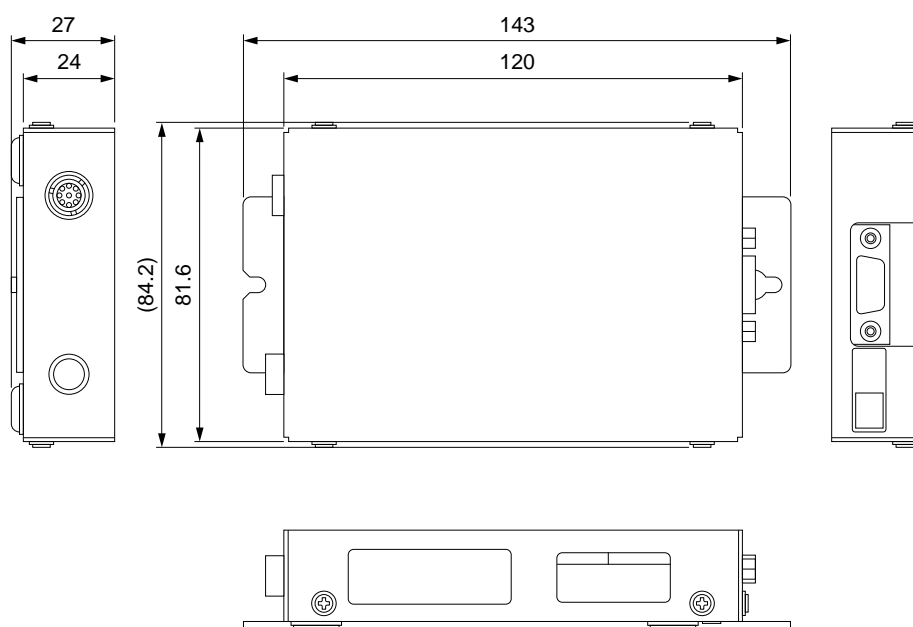
Humidity : No condense

Power Requirements : DC +12 V to +30 V

Power Consumption : 0.4 W

- Install the unit in a location as dry and well-ventilated as possible.
- Do not install the unit in the following conditions.
 - High temperature room or near the heat source
 - Intense magnetic and electric field
 - Excessive dust or mechanical vibration
 - A place subjected to direct sunlight or strong light

Outside Dimensions





Section 2

Spare Parts

2-1. Precaution of Replacement Parts

1. Safety Related Components Warning

Components marked \triangle are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

3. Stock of Parts

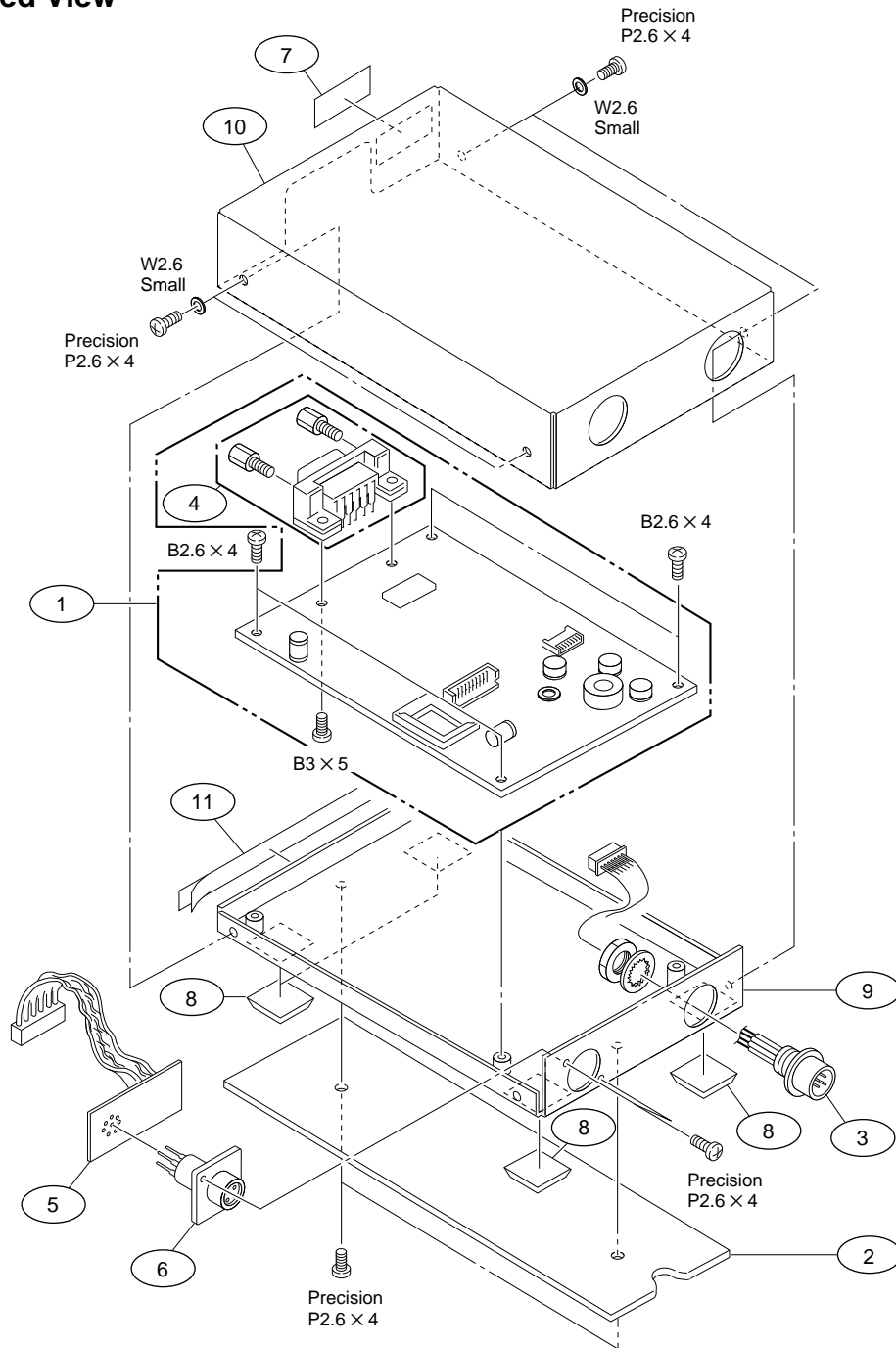
Parts marked with “o” at SP(Supply Code)column of the spare parts list may be not stocked. Therefore, the delivery date will be delayed.

4. Units Representation

The following represented units are changed or omitted in writing.

Units		Representation
Capacitance	μ F	uF
Inductance	μ H	uH
Resistance	Ω	Abbreviation
Temperature	$^{\circ}$ C	XXX-DEG-C

2-2. Exploded View



No.	Part No.	SP Description	No.	Part No.	SP Description
1	A-8272-795-A	o MOUNTED CIRCUIT BOARD, MPU-97	11	3-695-874-01	o BLIND SHEET, CASE
2	X-3678-509-1	o BRACKET, CASE ASSY		7-621-773-86	s SCREW +B 2.6X4
3	1-561-775-11	s CONNECTOR 6P MALE "CAMCORDER"		7-627-556-38	s SCREW +P 2.6X4.0
4	1-563-770-11	o SOCKET, D-SUB CONNECTOR 9P		7-682-546-04	s SCREW +B 3X5
5	1-659-723-11	o PRINTED CIRCUIT BOARD, CN-1260		7-688-002-02	s W 2.6, SMALL
6	1-766-696-11	o CONNECTOR, ROUND TYPE 8P FEMALE "CAMERA SYSTEM"			
7	3-184-994-01	o ISR STICKER (S)			
8	3-682-929-11	s LEG, RUBBER (SQUARE12.7)			
9	3-695-871-01	o CASE			
10	3-695-872-01	o LID, CASE			

2-3. Electrical Parts List

----- CN-1260 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-659-723-11	o PRINTED CIRCUIT BOARD, CN-1260
A3	1-562-741-11	o HOUSING, 8P
	1-564-831-11	o CONTACT, FEMALE
CN2	1-766-696-11	o CONNECTOR, 8P FEMALE

----- MPU-97 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8272-795-A	o MOUNTED CIRCUIT BOARD, MPU-97
2pcs	7-682-546-04	s SCREW +B 3X5
C1	1-162-966-11	s CERAMIC, CHIP 0.0022uF 10% 50V
C2	1-135-179-21	s TANTAL 2.2uF 10% 16V
C3	1-128-403-11	s ELECT 47uF 20% 35V
C4	1-128-394-11	s ELECT 220uF 20% 10V
C5	1-164-156-11	s CERAMIC 0.1uF 25V
C6	1-128-394-11	s ELECT 220uF 20% 10V
C7	1-135-179-21	s TANTAL 2.2uF 10% 16V
C8	1-135-166-21	s TANTALUM, CHIP 47uF 10% 10V
C9	1-164-156-11	s CERAMIC 0.1uF 25V
C10	1-135-166-21	s TANTALUM, CHIP 47uF 10% 10V
C11	1-164-156-11	s CERAMIC 0.1uF 25V
C12	1-135-179-21	s TANTAL 2.2uF 10% 16V
C13	1-162-964-11	s CERAMIC 0.001uF 10% 50V
C14	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C15	1-164-156-11	s CERAMIC 0.1uF 25V
C16	1-162-964-11	s CERAMIC 0.001uF 10% 50V
C17	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C18	1-164-156-11	s CERAMIC 0.1uF 25V
C19	1-135-179-21	s TANTAL 2.2uF 10% 16V
C20	1-162-959-11	s CERAMIC 330PF 5% 50V
C22	1-164-156-11	s CERAMIC 0.1uF 25V
C23	1-135-179-21	s TANTAL 2.2uF 10% 16V
C24	1-135-166-21	s TANTALUM, CHIP 47uF 10% 10V
C25	1-104-852-11	s TANTALUM, CHIP 22uF 20% 10V
C26	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C27	1-135-179-21	s TANTAL 2.2uF 10% 16V
C28	1-164-156-11	s CERAMIC 0.1uF 25V
C29	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C30	1-164-156-11	s CERAMIC 0.1uF 25V
C31	1-164-156-11	s CERAMIC 0.1uF 25V
C32	1-135-166-21	s TANTALUM, CHIP 47uF 10% 10V
C33	1-164-156-11	s CERAMIC 0.1uF 25V
C34	1-135-166-21	s TANTALUM, CHIP 47uF 10% 10V
C35	1-164-156-11	s CERAMIC 0.1uF 25V
C36	1-164-156-11	s CERAMIC 0.1uF 25V
C37	1-164-156-11	s CERAMIC 0.1uF 25V
C38	1-135-076-21	s TANTALUM, CHIP 1uF 10% 35V
C39	1-164-156-11	s CERAMIC 0.1uF 25V
C40	1-135-076-21	s TANTALUM, CHIP 1uF 10% 35V
C41	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C42	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C43	1-135-076-21	s TANTALUM, CHIP 1uF 10% 35V
C44	1-135-076-21	s TANTALUM, CHIP 1uF 10% 35V
C45	1-162-921-11	s CERAMIC, CHIP 33PF 5% 50V
C46	1-164-156-11	s CERAMIC 0.1uF 25V
C47	1-164-156-11	s CERAMIC 0.1uF 25V
C48	1-164-156-11	s CERAMIC 0.1uF 25V
C49	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C50	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C51	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C52	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C53	1-164-156-11	s CERAMIC 0.1uF 25V
C54	1-164-156-11	s CERAMIC 0.1uF 25V
C55	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C56	1-135-177-21	s TANTALUM, CHIP 1uF 10% 25V
C57	1-164-156-11	s CERAMIC 0.1uF 25V

(MPU-97 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C58	1-164-156-11	s CERAMIC 0.1uF 25V
C59	1-164-156-11	s CERAMIC 0.1uF 25V
C60	1-164-156-11	s CERAMIC 0.1uF 25V
C61	1-164-156-11	s CERAMIC 0.1uF 25V
C62	1-164-156-11	s CERAMIC 0.1uF 25V
C63	1-164-156-11	s CERAMIC 0.1uF 25V
C64	1-135-166-21	s TANTALUM, CHIP 47uF 10% 10V
C65	1-164-156-11	s CERAMIC 0.1uF 25V
C66	1-162-957-11	s CERAMIC 220PF 5% 50V
C67	1-135-164-21	s TANTALUM, CHIP 22uF 20% 10V
C68	1-104-656-11	s ELECT 2200uF 20% 6.3V
CN1	1-506-473-11	o CONNECTOR, 8P, MALE
CN2	1-565-153-11	o PIN, CONNECTOR (ANGLE) 6P
CN3	1-563-770-11	o CONNECTOR D-SUB 9P FEMALE
D1	8-719-029-55	s DIODE RD2.0UH-T1
D2	8-719-023-53	s DIODE EA30QS04-F
D3	8-719-820-41	s DIODE 1SS302
D4	8-719-029-55	s DIODE RD2.0UH-T1
D5	8-719-820-41	s DIODE 1SS302
D6	8-719-210-39	s DIODE EC10QS-04
D7	8-719-023-53	s DIODE EA30QS04-F
D8	8-719-023-53	s DIODE EA30QS04-F
IC1	8-759-937-36	s IC TL1451ACNS
IC2	8-759-173-16	s IC TL062CPW
IC3	8-759-092-81	s IC SN75158PS
IC4	8-759-277-99	s IC CXD8889R
IC6	8-759-049-55	s IC SN74HC00APW-E20
IC7	8-759-049-56	s IC SN74HC02APW-E05
IC8	8-759-049-96	s IC SN74HC32APW-E20
IC9	8-759-149-05	s IC UPD71051GB-10-3B4
IC10	8-759-521-07	s IC MAX238CWG
IC11	8-759-442-04	o IC H8/532-100BOOT-V1.00
IC12	8-759-973-71	s IC TL7705CPS-B
IC13	8-759-521-15	s IC MAX232CWE
IC14	8-759-444-16	o IC 28F020-BZP100-V1.00
IC15	8-759-050-10	s IC SN74HC163APW-E05
IC16	8-759-049-98	s IC SN74HC74APW-E20
IC17	8-752-365-33	s IC CXK581000ATM-70LL
IC18	8-759-299-40	s IC AM28F010-120EC
IC19	8-759-050-10	s IC SN74HC163APW-E05
IC20	8-759-285-08	s IC CXD8344AQ
IC21	8-759-054-08	s IC MC34063AM
IS14	1-540-151-21	s SOCKET, IC
L1	1-412-032-11	s INDUCTOR CHIP 100uH
L2	1-412-032-11	s INDUCTOR CHIP 100uH
L3	1-412-049-11	s CHOKe 200uH
L4	1-412-032-11	s INDUCTOR CHIP 100uH
L5	1-412-031-11	s INDUCTOR CHIP 47uH
L6	1-424-627-11	s COIL 60uH
PH1	8-749-924-62	s PNOTO COUPLER PC410
PH2	8-749-924-62	s PNOTO COUPLER PC410
Q1	8-729-101-07	s TRANSISTOR 2SB798
Q2	8-729-101-07	s TRANSISTOR 2SB798
Q3	8-729-140-63	s TRANSISTOR 2SA1611-M5M6
Q4	8-729-101-07	s TRANSISTOR 2SB798
Q5	8-729-140-63	s TRANSISTOR 2SA1611-M5M6

(MPU-97 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R1	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R2	1-218-724-11	s CHIP, METAL 22K 5% 1/16W
R3	1-218-708-11	s METAL 4.7K 0.50% 1/16W
R4	1-218-716-11	s METAL 10K 0.50% 1/16W
R5	1-218-883-11	s METAL 33K 0.50% 1/16W
R6	1-218-637-11	s METAL, CHIP 820 5% 1W
R7	1-218-873-11	s CHIP, METAL 12K 0.50% 1/16W
R8	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R9	1-218-716-11	s METAL 10K 0.50% 1/16W
R10	1-218-716-11	s METAL 10K 0.50% 1/16W
R11	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R12	1-218-716-11	s METAL 10K 0.50% 1/16W
R13	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R14	1-218-732-11	s METAL 47K 0.50% 1/16W
R15	1-218-716-11	s METAL 10K 0.50% 1/16W
R16	1-218-732-11	s METAL 47K 0.50% 1/16W
R17	1-218-740-11	s METAL 100K 0.50% 1/16W
R18	1-216-831-11	s METAL, CHIP 6.8K 5% 1/16W
R19	1-218-716-11	s METAL 10K 0.50% 1/16W
R20	1-218-671-11	s CHIP, METAL 130 0.50% 1/16W
R21	1-218-716-11	s METAL 10K 0.50% 1/16W
R22	1-218-716-11	s METAL 10K 0.50% 1/16W
R23	1-218-716-11	s METAL 10K 0.50% 1/16W
R24	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R25	1-216-831-11	s METAL, CHIP 6.8K 5% 1/16W
R26	1-218-864-11	s CHIP, METAL 5.1K 0.50% 1/16W
R27	1-218-740-11	s METAL 100K 0.50% 1/16W
R28	1-218-740-11	s METAL 100K 0.50% 1/16W
R29	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R30	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R31	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R32	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R33	1-218-676-11	s METAL 220 0.50% 1/16W
R34	1-218-676-11	s METAL 220 0.50% 1/16W
R36	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R37	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R38	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R39	1-216-811-11	s METAL, CHIP 150 5% 1/16W
R40	1-216-848-11	s METAL, CHIP 180K 5% 1/16W
R41	1-218-723-11	s METAL 20K 0.50% 1/16W
RB1	1-239-308-11	s RESISTOR BLOCK, CHIP 47KX8
RB2	1-239-308-11	s RESISTOR BLOCK, CHIP 47KX8
RB3	1-239-308-11	s RESISTOR BLOCK, CHIP 47KX8
RB4	1-239-308-11	s RESISTOR BLOCK, CHIP 47KX8
RB5	1-239-308-11	s RESISTOR BLOCK, CHIP 47KX8
RB6	1-239-309-11	s RESISTOR BLOCK, CHIP 100KX8
RB7	1-239-309-11	s RESISTOR BLOCK, CHIP 100KX8
RB8	1-239-309-11	s RESISTOR BLOCK, CHIP 100KX8
RB10	1-236-904-11	s RESISTOR BLOCK, CHIP 1KX4
RB11	1-236-904-11	s RESISTOR BLOCK, CHIP 1KX4
S2	1-571-187-11	s SWITCH, TACTIL (REFLOW TYPE)
X1	1-760-435-11	s CRYSTAL 18.00MHZ

FRAME

Ref. No. or Q'ty	Part No.	SP Description
CN101	1-561-775-11	s CONNECTOR 6P MALE "CAMCORDER"
CN1F(TO MPU-97 BOARD)		
	1-569-201-11	o HOUSING, 8P
	1-569-194-11	o CONTACT, FEMALE AWG24-30
CN2F(TO MPU-97 BOARD)		
	1-565-125-11	o HOUSING, CONNECTOR 6P
	1-565-164-21	o CONTACT, FEMALE AWG26-28

SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-751-211-11	s CABLE ASSY 6P
	1-560-078-21	s CONNECTOR, 6P MALE
	1-561-800-21	s CONNECTOR, 6P FEMALE
1pc	1-776-529-11	s CORD, CONNECTION (RS-232C CROSS)
1pc	3-695-877-01	s LABEL(1), DISK
1pc	3-695-878-01	s LABEL(2), DISK
1pc	3-695-879-01	s LABEL(3), DISK

Section 3

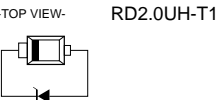
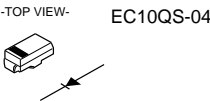
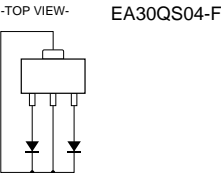
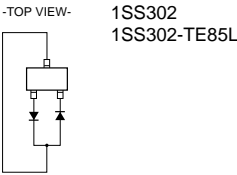
Semiconductor Pin Assignments

ここに記載されている半導体は、それぞれの機能を等価的に表したものです。なお、互換性のない型名を併記していることがありますので、部品を交換するときは、Spare Partsの章を参照してください。
等価回路は I C メーカーのデータブックに従いました。

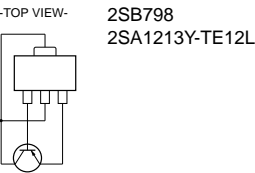
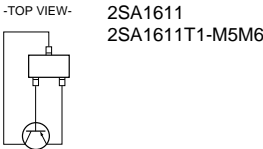
Semiconductors of which functions are equivalent are described here. For parts replacement, refer to the section of Spare Parts in this manual. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

DIODE	Page	TRANSISTOR	Page	IC	Page
1SS302	3-2	2SA1213Y-TE12L	3-2	CXD8344AQ	3-2
1SS302-TE85L	3-2	2SA1611	3-2	CXK581000ATM-70LL	3-3
EA30QS04-F	3-2	2SA1611T1-M5M6	3-2	E28F010-120	3-3
EC10QS-04	3-2	2SB798	3-2	HD6475328F10	3-4
RD2.0UH-T1	3-2			MAX232CWE	3-3
				MAX232CWE-TE-2	3-3
				MAX238CWG	3-5
				MAX238CWG-TE2	3-5
				MC34063AM	3-5
				N28F020-90	3-5
				PC410	3-5
				SN74HC00APW	3-6
				SN74HC00APW-E05	3-6
				SN74HC02APW-E05	3-6
				SN74HC163APW	3-6
				SN74HC163APW-E05	3-6
				SN74HC32APW	3-6
				SN74HC32APW-E05	3-6
				SN74HC74APW	3-6
				SN74HC74APW-E05	3-6
				SN75158PS	3-6
				SN75158PS-E20	3-6
				TL062CPW	3-6
				TL062CPW-ELL2000	3-6
				TL1451ACNS	3-7
				TL1451ACNS-E05	3-7
				TL7705CPS-B	3-7
				TL7705CPS-B-E05	3-7
				UPD71051GB-10-3B4	3-7

DIODE



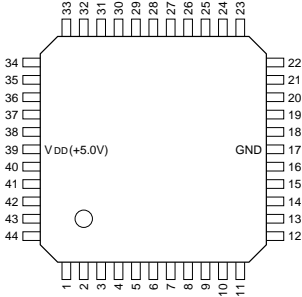
TRANSISTOR



IC

CXD8344AQ(SONY)

C-MOS PULSE GENERATOR
- TOP VIEW -

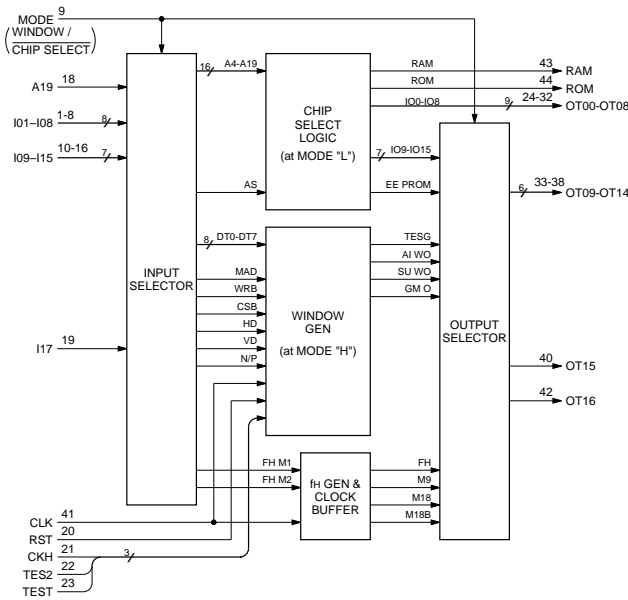


(VDD = +5.0V)

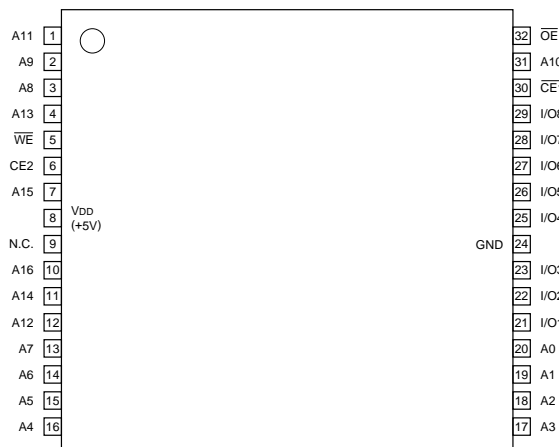
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	I01	12	I	I11	23	I	TEST	34	O	OT10
2	I	I02	13	I	I12	24	O	OT00	35	O	OT11
3	I	I03	14	I	I13	25	O	OT01	36	O	OT12
4	I	I04	15	I	I14	26	O	OT02	37	O	OT13
5	I	I05	16	I	I15	27	O	OT03	38	O	OT14
6	I	I06	17	-	GND	28	O	OT04	39	-	VDD
7	I	I07	18	I	A19	29	O	OT05	40	O	OT15
8	I	I08	19	I	I17	30	O	OT06	41	I	CLK
9	I	MODE	20	I	RST	31	O	OT07	42	O	OT16
10	I	I09	21	I	CKH	32	O	OT08	43	O	RAM
11	I	I10	22	I	TES2	33	O	OT09	44	O	ROM

INPUT
A19 : ADDRESS INPUT
CKH : FOR TEST
CLK : CLOCK
I01-I17 : INPUT
MODE : MODE SELECT
(H:WINDOW GEN / L:CHIP SELECT LOGIC)
RST : RESET
TES2 : FOR TEST
TEST : FOR TEST

OUTPUT
OT00-OT16 : OUTPUT
RAM : RAM OUT
ROM : ROM OUT



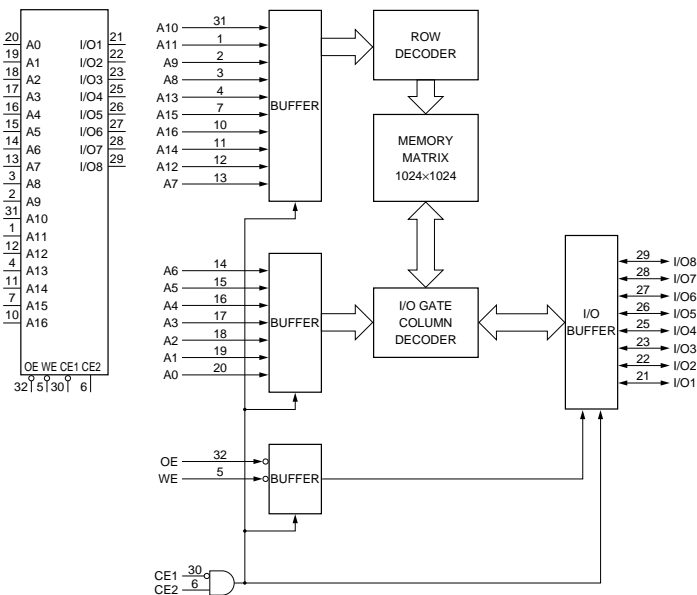
CXK581000ATM-70LL(SONY)

C-MOS 1M(131.072×8)BIT STATIC RAM
-TOP VIEW-

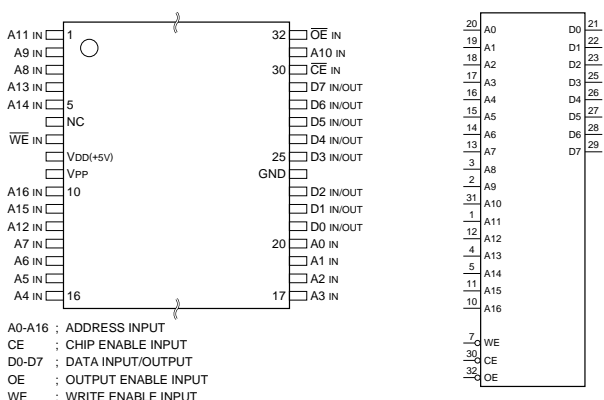
A0-A16 : ADDRESS INPUTS
I/O1-I/O8 : DATA INPUTS/OUTPUTS
CE1,CE2 : CHIP ENABLE1,2 INPUTS
WE : WRITE ENABLE INPUT
OE : OUTPUT ENABLE INPUT

CE1	CE2	OE	WE	MODE	I/O TERMINAL
1	X	X	X	NOT SELECT	HIGH IMPEDANCE
X	0	X	X	NOT SELECT	HIGH IMPEDANCE
0	1	1	1	OUTPUT DISABLE	HIGH IMPEDANCE
0	1	0	1	READ	OUTPUT DATA
0	1	X	0	WRITE	INPUT DATA

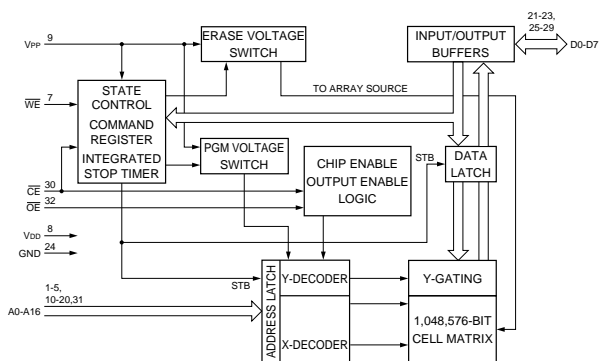
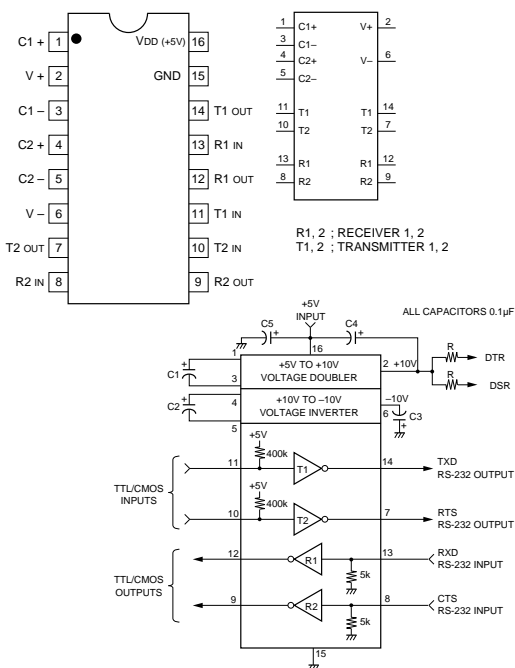
0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE



E28F010-120(INTEL)FLAT PACKAGE

1M-BIT FLASH ROM
-TOP VIEW-

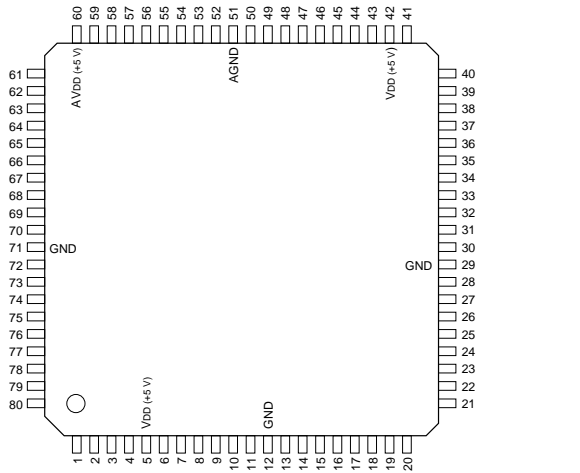
A0-A16 : ADDRESS INPUT
CE : CHIP ENABLE INPUT
D0-D7 : DATA INPUT/OUTPUT
OE : OUTPUT ENABLE INPUT
WE : WRITE ENABLE INPUT

MAX232CWE(MAXIM)
MAX232CWE-TE-2C-MOS RS-232 TRANSMITTER/RECEIVER
-TOP VIEW-

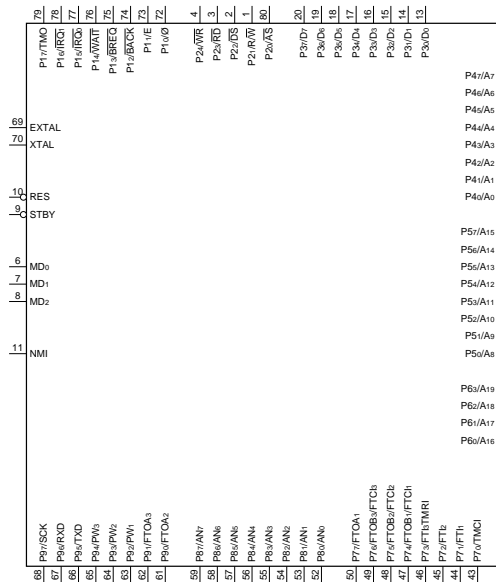
HD6475328F10(HITACHI)

C-MOS 16-BIT MICROPROCESSOR

— TOP VIEW —



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I/O	P21/R/W	28	I/O	P47/A7	55	I/O	P83/AN3
2	I/O	P22/D5	29	—	GND	56	I/O	P84/AN4
3	I/O	P23/RD	30	I/O	P50/A8	57	I/O	P85/AN5
4	I/O	P24/WR	31	I/O	P51/A9	58	I/O	P86/AN6
5	—	VDD	32	I/O	P52/A10	59	I/O	P87/AN7
6	I	MD0	33	I/O	P53/A11	60	—	AVDD
7	I	MD1	34	I/O	P54/A12	61	I/O	P90/FTOA2
8	I	MD2	35	I/O	P55/A13	62	I/O	P91/FTOA3
9	I	STBY	36	I/O	P56/A14	63	I/O	P92/PW1
10	I	RES	37	I/O	P57/A15	64	I/O	P93/PW2
11	I	NMI	38	I/O	P60/A16	65	I/O	P94/PW3
12	—	GND	39	I/O	P61/A17	66	I/O	P95/TXD
13	I/O	P30/D0	40	I/O	P62/A18	67	I/O	P96/RXD
14	I/O	P31/D1	41	I/O	P63/A19	68	I/O	P97/SCK
15	I/O	P32/D2	42	—	VDD	69	I	EXTAL
16	I/O	P33/D3	43	I/O	P70/TMCI	70	I	XTAL
17	I/O	P34/D4	44	I/O	P71/FTI1	71	—	VSS
18	I/O	P35/D5	45	I/O	P72/FTI2	72	I/O	P10/A
19	I/O	P36/D6	46	I/O	P73/FTI3/TMRI	73	I/O	P11/E
20	I/O	P37/D7	47	I/O	P74/FTOB1/FTCI1	74	I/O	P12/BACK
21	I/O	P40/A0	48	I/O	P75/FTOB2/FTCI2	75	I/O	P12/BREQ
22	I/O	P41/A1	49	I/O	P76/FTOB3/FTCI3	76	I/O	P12/WAIT
23	I/O	P42/A2	50	O	P77/FTOA1	77	I/O	P12/IRQ0
24	I/O	P43/A3	51	—	AGND	78	I/O	P12/IRQ1
25	I/O	P44/A4	52	I/O	P80/AN0	79	I/O	P12/TMO
26	I/O	P45/A5	53	I/O	P81/AN1	80	I/O	P12/AS
27	I/O	P46/A6	54	I/O	P82/AN2			



INPUT

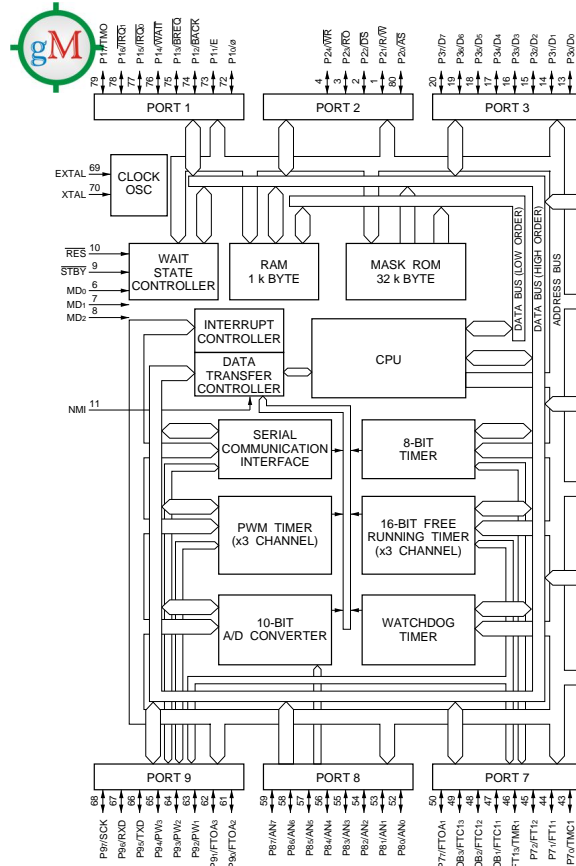
- AN0-AN7 : ANALOG INPUT
- BREQ : BUS REQUEST
- EXTAL : CONNECTED TO CRYSTAL OSCILLATOR.
- ETCI1-FTCI3 : FRT COUNTER CLOCK INPUT (CHANNEL 1 TO 3)
- FTI1-FTI3 : FRT INPUT CAPTURE INPUT (CHANNEL 1 TO 3)
- IRQ0, 1 : INTERRUPTION REQUEST 0 AND 1
- MD0-MD2 : MODE SETTING
- NMI : NON MASKABLE INTERRUPTION
- P80-P87 : PORT 8
- RES : RESET
- RXD : RECEIVE DATA
- STBY : STANDBY
- TMCI : 8-BIT TIMER CLOCK INPUT
- TMRI : 8-BIT TIMER COUNTER RESET INPUT
- WAIT : WAIT
- XTAL : CONNECTED TO CRYSTAL OSCILLATOR.

OUTPUT

- A0-A19 : ADDRESS BUS
- AS : ADDRESS STROBE
- BACK : BUS REQUEST ACKNOWLEDGE
- DS : DATA STROBE
- E : ENABLE CLOCK
- FTOA1-FTOA3 : FRT OUTPUT COMPARE A OUTPUT (CHANNEL 1 TO 3)
- FTOB1-FTOB3 : FRT OUTPUT COMPARE B OUTPUT (CHANNEL 1 TO 3)
- PW1-PW3 : PWM TIMER OUTPUT (CHANNEL 1 TO 3)
- R/W : READ/WRITE
- RD : READ
- TMO : 8-BIT TIMER OUTPUT
- TXD : SEND DATA
- WR : WRITE
- φ : SYSTEM CLOCK

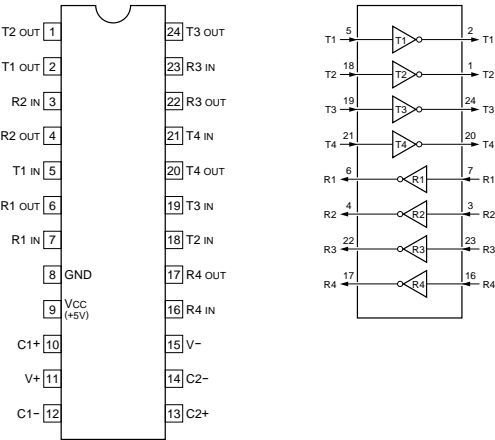
INPUT/OUTPUT

- D0-D7 : DATA BUS
- P10-P17 : PORT 1
- P20-P24 : PORT 2
- P30-P37 : PORT 3
- P40-P47 : PORT 4
- P50-P57 : PORT 5
- P60-P63 : PORT 6
- P70-P77 : PORT 7
- P80-P87 : PORT 8
- SCK : SERIAL CLOCK INPUT/OUTPUT



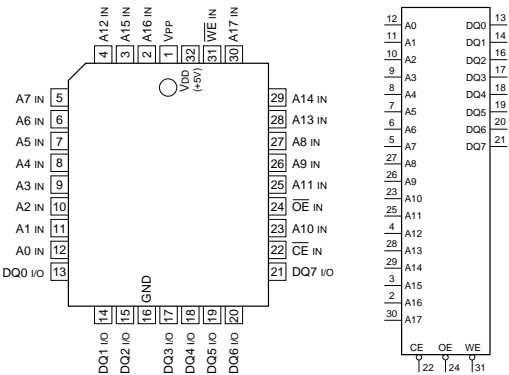
MAX238CWG(MAXIM)FLAT PACKAGE
MAX238CWG-TE2

+5V POWER RS-232 DRIVERS/RECEIVERS
-TOP VIEW-



N28F020-90(INTEL)FLAT PACKAGE

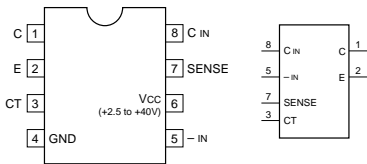
C-MOS 2048K-BIT FLASH MEMORY
-TOP VIEW-



A0-A17 ; ADDRESS INPUTS
CE ; CHIP ENABLE INPUT
OE ; OUTPUT ENABLE INPUT
WE ; WRITE ENABLE INPUT
DQ0-DQ7 ; DATA INPUTS/OUTPUTS
VPP ; ERASE/PROGRAM POWER SUPPLY

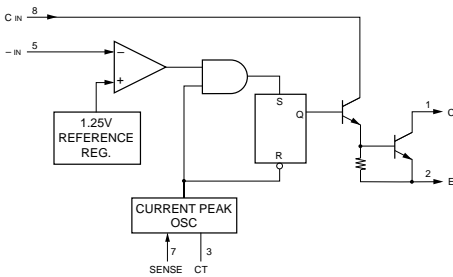
MC34063AM(MOTOROLA)FLAT PACKAGE

DC-DC CONVERTER CONTROLLER
-TOP VIEW-



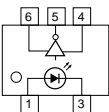
INPUT
C IN ; DRIVE COLLECTOR
CT ; TIMING CAPACITOR
-IN ; COMPARATOR INVERTING
SENSE ; CURRENT PEAK SENSE

OUTPUT
C ; SWITCH COLLECTOR
E ; SWITCH EMITTER



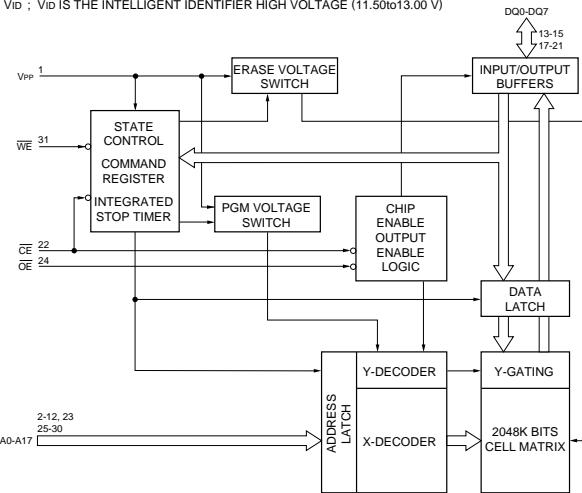
PC410(Sharp)FLAT PACKAGE

OPIC-OUTPUT PHOTO COUPLER
-TOP VIEW-



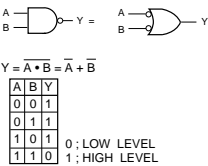
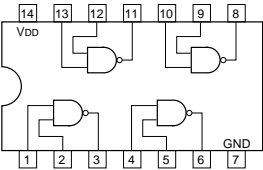
OPERATION		Vpp	A0	A9	CE	OE	WE	DQ0-DQ7
READ-ONLY	READ	0	A0	A9	0	0	1	DATA OUT
	OUTPUT DISABLE	0	X	X	0	1	1	TRI-STATE
	STANDBY	0	X	X	1	X	X	TRI-STATE
	INTELLIGENT IDENTIFIER(MFR)	0	0	Vid	0	0	1	DATA = 89H
READ/WRITE	INTELLIGENT IDENTIFIER(DEVICE)	0	1	Vid	0	0	1	DATA = BDH
	READ	1	A0	A9	0	0	1	DATA OUT
	OUTPUT DISABLE	1	X	X	0	1	1	TRI-STATE
	STANDBY	1	X	X	1	X	X	TRI-STATE
	WRITE	1	A0	A9	0	1	0	DATA-IN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
Vid ; Vid IS THE INTELLIGENT IDENTIFIER HIGH VOLTAGE (11.50to13.00 V)



SN74HC00APW(TI)
SN74HC00APW-E05

C-MOS QUAD 2-INPUT NAND GATES
—TOP VIEW—

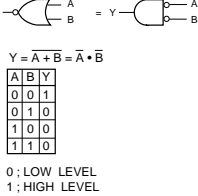
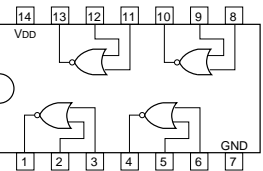


NOTE:

TYPE	V _{DD}
TC74AC00 TYPE	+2 to +5.5V
TC74VHC00	
MC74HCT00N	+5V
74ACT00 TYPE	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

SN74HC02APW-E05(TI)

C-MOS QUAD 2-INPUT NOR GATES
—TOP VIEW—

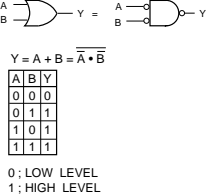
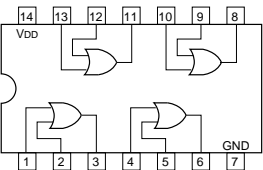


NOTE:

TYPE	V _{DD}
HC	+2 to +6V
AC/VHC	
HCT/ACT	+5V

SN74HC32APW(TI)FLAT PACKAGE
SN74HC32APW-E05

C-MOS QUAD 2-INPUT OR GATES
—TOP VIEW—

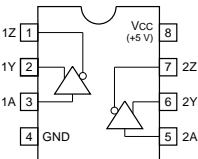


NOTE:

TYPE	V _{DD}
AC/VHC	+2 to +5.5V
HC	+2 to +6V

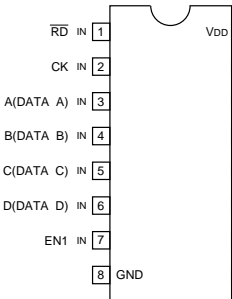
SN75158PS(TI)
SN75158PS-E20

DUAL DIFFERENTIAL LINE DRIVE
—TOP VIEW—



SN74HC163APW(TI)FLAT PACKAGE
SN74HC163APW-E05

C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
—TOP VIEW—

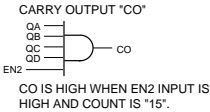


NOTE:

TYPE	V _{DD}
HC	+2 to +6V
AC/VHC	+2 to +5.5V
HCT/ACT/FCT	+5V

MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

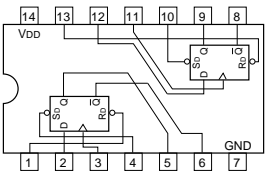


COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

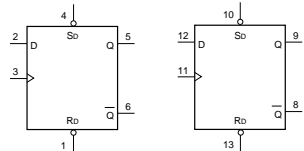
SN74HC74APW(TI)FLAT PACKAGE
SN74HC74APW-E05

C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET
—TOP VIEW—



INPUTS				OUTPUTS	
S _D	R _D	CK	D	Q _{n+1}	Q _n
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Q _n	Q _n

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

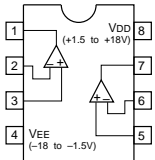


NOTE:

TYPE	V _{DD}
HCT/ACT	+5V
TC74AC/VHC	+2 to +5.5V
OTHERS	+2 to +6V

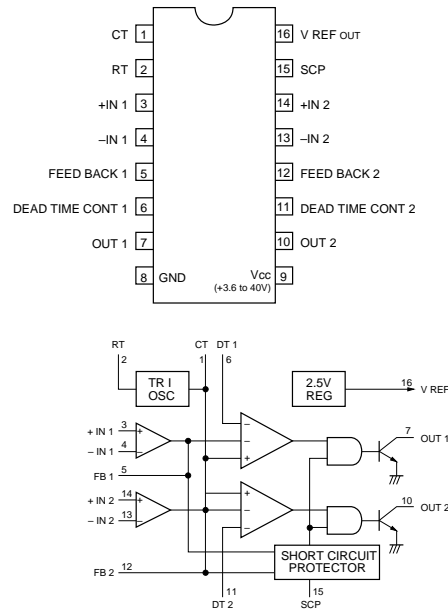
TL062CPW(TI)FLAT PACKAGE
TL062CPW-ELL2000

OPERATIONAL AMPLIFIER
(J FET INPUT)
—TOP VIEW—



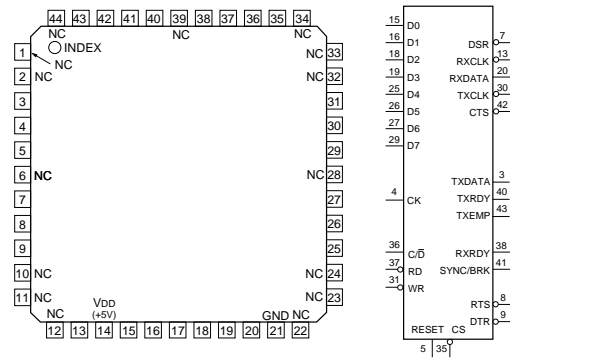
TL1451ACNS(TI)FLAT PACKAGE TL1451ACNS-E05

DUAL PWM POWER CONTROLLER -TOP VIEW-



UPD71051GB-10-3B4(NEC)FLAT PACKAGE

C-MOS SERIAL CONTROLLER -TOP VIEW-



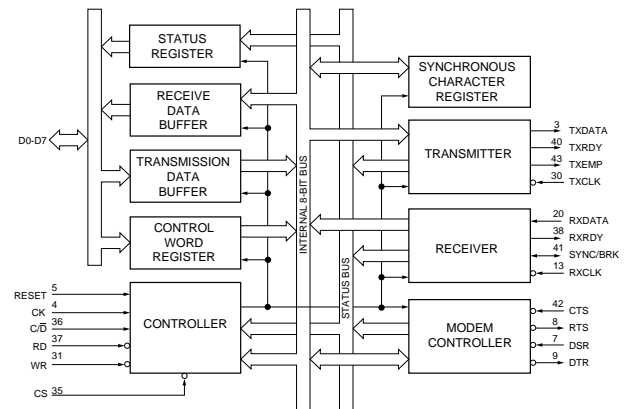
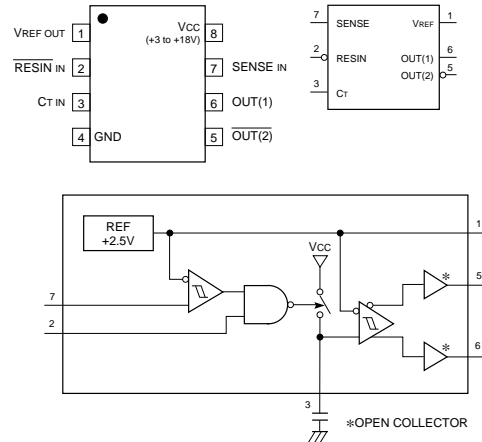
PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL
1	—	NC	12	—	NC	23	—	NC	34	—	NC
2	—	NC	13	I	RXCLK	24	—	NC	35	I	CS
3	O	TXDATA	14	—	VDD(+5V)	25	I/O	D4	36	I	C/D
4	I	CK	15	I/O	D0	26	I/O	D5	37	I	RD
5	I	RESET	16	I/O	D1	27	I/O	D6	38	O	RXRDY
6	—	NC	17	—	IC	28	—	NC	39	—	NC
7	I	DSR	18	I/O	D2	29	I/O	D7	40	O	TXRDY
8	O	RTS	19	I/O	D3	30	I	TXCLK	41	I/O	SYNC/BRK
9	O	DTR	20	I	RXDATA	31	I	WR	42	I	CTS
10	—	NC	21	—	GND	32	—	NC	43	O	TXEMP
11	—	NC	22	—	NC	33	—	NC	44	—	NC

CK : CLOCK INPUT
CS : CHIP SELECT INPUT
CTS : CLEAR TO SEND OUTPUT
C/D : CONTROL/DATA SELECT INPUT
D0-D7 : DATA INPUTS/OUTPUTS
DSR : DATA SET READY INPUT
DTR : DATA TERMINAL READY OUTPUT
TXCLK : TRANSMITTER CLOCK INPUT
TXDATA : TRANSMIT DATA OUTPUT
TXEMP : TRANSMITTER EMPTY OUTPUT

TXRDY : TRANSMIT READY OUTPUT
RD : READ STROBE INPUT
RESET : RESET INPUT
RTS : REQUEST TO SEND OUTPUT
RXCLK : RECEIVER CLOCK INPUT
RXDATA : RECEIVE DATA INPUT
RXRDY : RECEIVER READY OUTPUT
SYNC/BRK : SYNCHRONIZATION/BREAK INPUT/OUTPUT
WR : WRITE STROBE INPUT

TL7705CPS-B(TI)FLAT PACKAGE TL7705CPS-B-E05

POWER VOLTAGE SUPERVISOR -TOP VIEW-



Section 4

Schematic Diagram

BZP-100 (SY)

MPU-97 (1-659-722-11)

* : B SIDE

CN1 C2
CN2 A2
CN3 B5

D1 *B1
D2 A2
D3 C1
D4 *B1
D5 C1
D6 D4
D7 B3
D8 C2

E1 A5
E2 *D5
E3 C1
E4 C2

IC1 *B2
IC2 *B1
IC3 B3
IC4 A3
IC6 C3
IC7 *A4
IC8 A5
IC9 A4
IC10 A5
IC11 C4
IC12 *D5
IC13 *A3
IC14 D2
IC15 *A4
IC16 *A4
IC17 *D2
IC18 *D3
IC19 *B4
IC20 *D3
IC21 D4

IS14 D2

L1 *B3
L2 B2
L3 A1
L4 *A1
L5 *D5
L6 D4

PH1 C3
PH2 C3

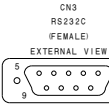
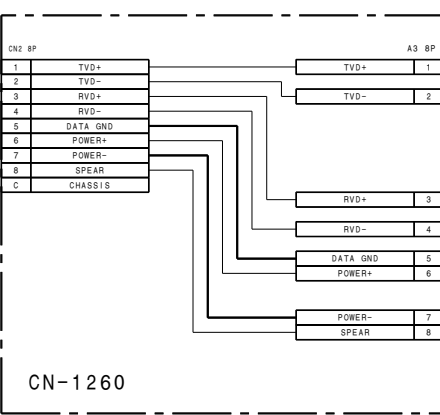
Q1 A2
Q2 *B1
Q3 *B2
Q4 *B1
Q5 *D4

RB1 *B4
RB2 *B4
RB3 *C4
RB4 *C4
RB5 *C4
RB6 *C4
RB7 *C4
RB8 *C4
RB10 *B5
RB11 *B5

S2 C5

TP1 B3
TP2 B3
TP3 B3
TP4 *A3
TP5 *A2
TP6 A5
TP7 A5
TP8 B3
TP15 *D4

X1 *B4



CN3 15/9/ 8FF	5	SG
CN3 13/9/ 8FF	3	TXD OUT
CN3 14/9/ 8FF	4	DTR OUT
CN3 17/9/ 8FF	7	RTS OUT
CN3 11/9/ 8FF	1	DCD IN
CN3 12/9/ 8FF	2	RXD IN
CN3 16/9/ 8FF	6	DSR IN
CN3 18/9/ 8FF	8	CTS IN
CN3 19/9/ 8FF	9	NC

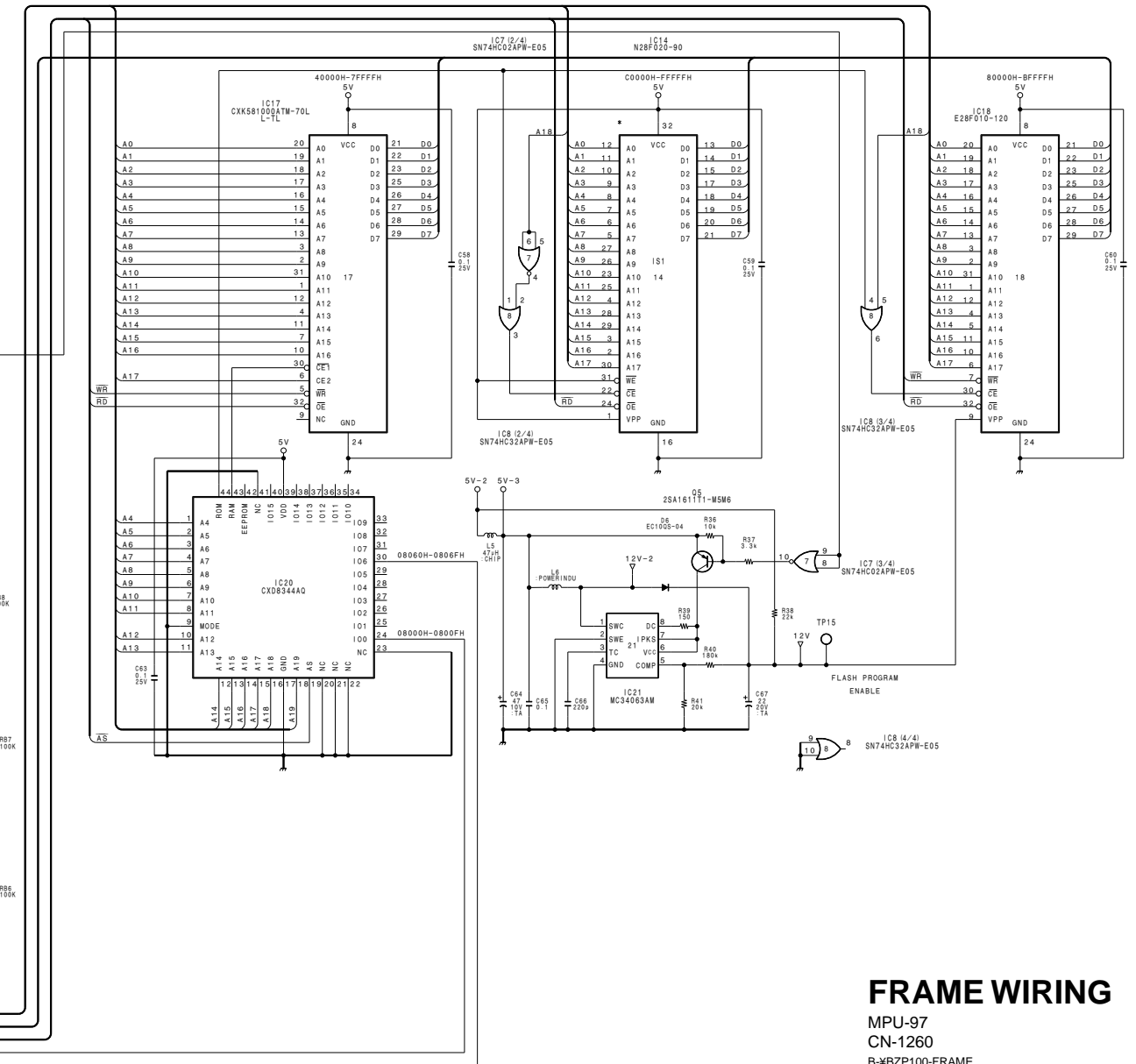
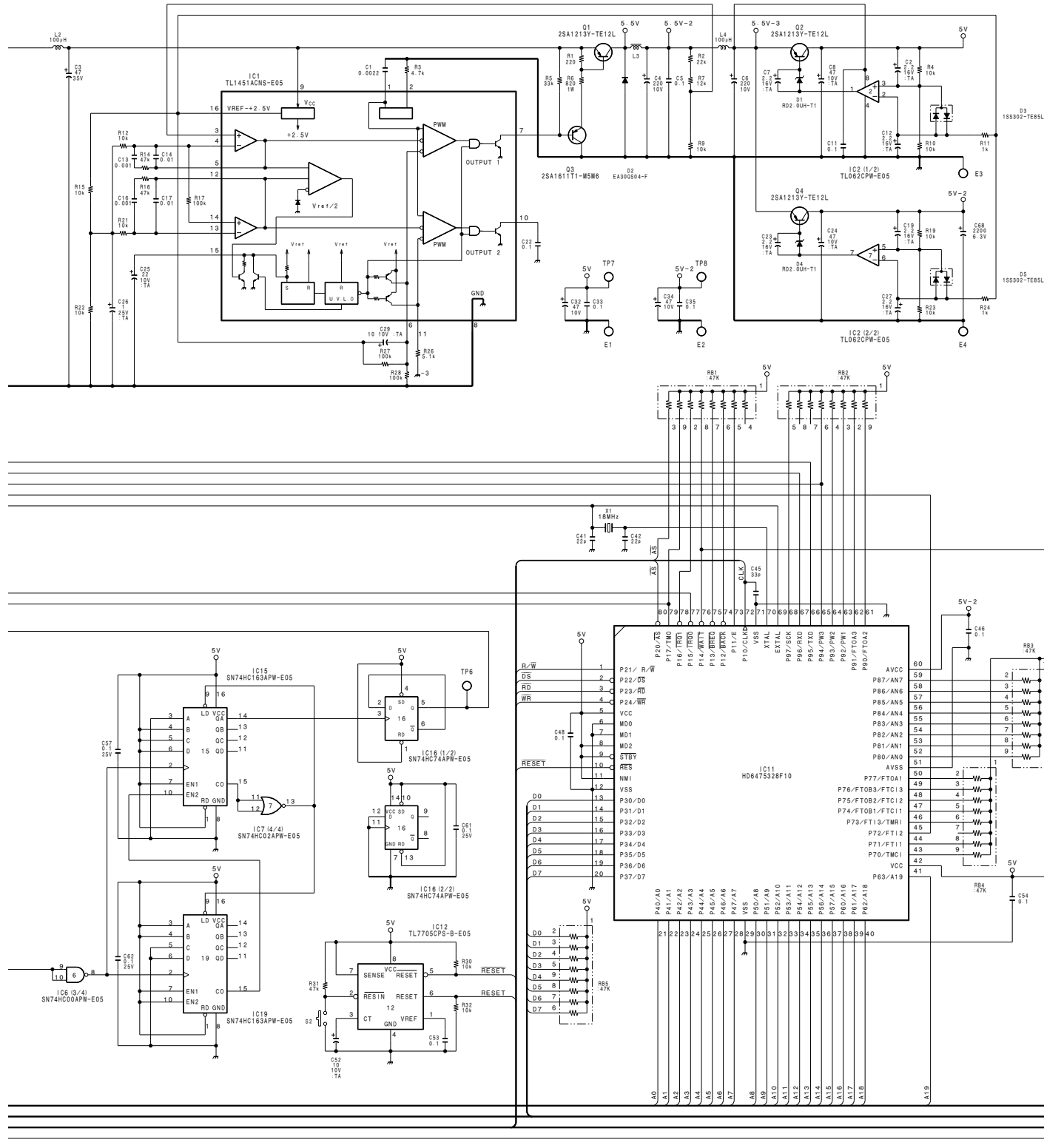


CN101	1	TXD
	2	RXD
	3	UNREG GND
	4	TEST (X)
	5	TEST (G)
	6	UNREG

CN2	1	TXD
	2	RXD
	4	TEST (X)
	5	TEST (G)
	6	UNREG
	3	UNREG GND

4-2

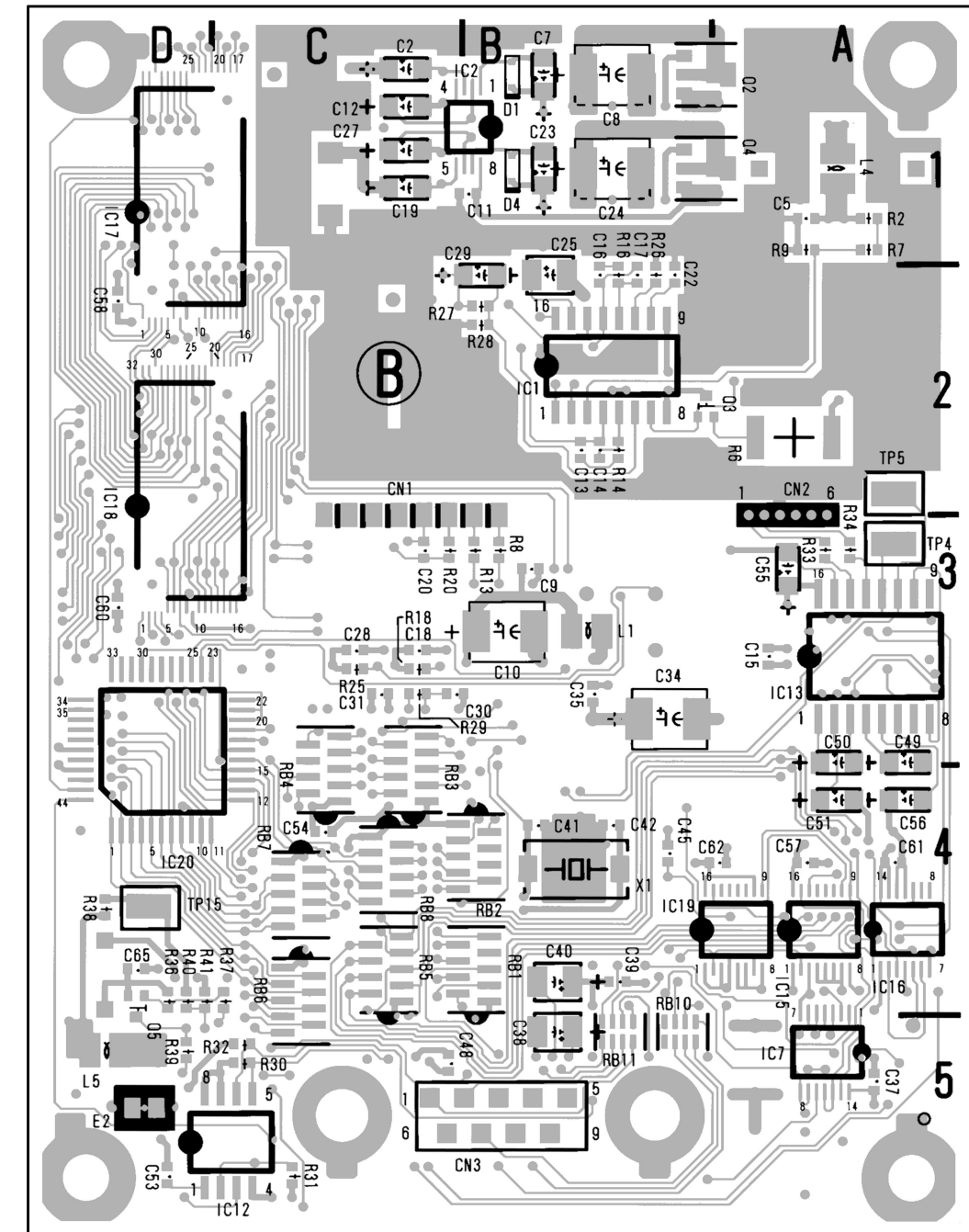
4-2



FRAME WIRING

MPU-97
CN-1260
B-¥BZP100-FRAME

MPU-97 -A SIDE-
1-659-722-11



5-1



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